

## SEQUENCE LISTING

<110> Thompson, Penny J.  
Sheppard, Paul O.

## <120> Uses of Human Zven Antagonists

<130> 02-22

<150> 60/416,719  
<151> 2002-10-07

<150> 60/416,718  
<151> 2002-10-07

<150> 60/434,116  
<151> 2002-12-16

<150> 60/433,918  
<151> 2002-12-16

<150> to be determined  
<151> 2003-10-03

<150> to be determined  
<151> 2003-10-03

<160> 29

<170> FastSEQ for Windows Version 4.0

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<210> 1
<211> 1496
<212> DNA
<213> Homo sapiens
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<220>  
<221> CDS  
<222> (66) . . . (389)

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<400> 1
cgcccttaact cactataggg ctcgagcggc cgcccccggca ggtgccggcc agtcccgagg 60
gcgcc atg agg agc ctg tgc tgc gcc cca ctc ctg ctc ctc ttg ctg ctg
    Met Arg Ser Leu Cys Cys Ala Pro Leu Leu Leu Leu Leu Leu Leu
    1           5           10          15

```

ccg ccg ctg ctg ctc acg ccc cgc gct ggg gac gcc gcc gtg atc acc 158  
 Pro Pro Leu Leu Leu Thr Pro Arg Ala Gly Asp Ala Ala Val Ile Thr  
                   20                  25                  30

```

ggg gct tgt gac aag gac tcc caa tgt ggt gga ggc atg tgc tgt gct 206
Gly Ala Cys Asp Lys Asp Ser Gln Cys Gly Gly Gly Met Cys Cys Ala
          35           40           45

```

gtc agt atc tgg gtc aag agc ata agg att tgc aca cct atg ggc aaa 254  
 Val Ser Ile Trp Val Lys Ser Ile Arg Ile Cys Thr Pro Met Gly Lys  
           50                 55                 60

ctg gga gac agc tgc cat cca ctg act cgt aaa gtt cca ttt ttt ggg 302

Leu Gly Asp Ser Cys His Pro Leu Thr Arg Lys Val Pro Phe Phe Gly  
 65 70 75

cg~~g~~ agg atg cat cac act tgc cca t~~g~~t c~~g~~t cca ggc tt~~g~~ gcc t~~g~~t t~~ta~~  
 Arg Arg Met His His Thr Cys Pro Cys Leu Pro Gly Leu Ala Cys Leu  
 80 85 90 95

cg~~g~~ act tca t~~tt~~ aac cga t~~tt~~ att t~~g~~t t~~ta~~ gcc caa aag taatcgctct  
 Arg Thr Ser Phe Asn Arg Phe Ile Cys Leu Ala Gln Lys  
 100 105

ggagtagaaa ccaa~~atgt~~ga atagccacat cttac~~ctgt~~ta aagtcttact t~~tg~~gatt~~tg~~g  
 ccaa~~acaaa~~ aatgt~~gccc~~ag aaaga~~aatgc~~ t~~cttg~~cttcc t~~caactt~~cc aagtaacatt  
 ttat~~cttt~~tg at~~ttgt~~aaat gat~~ttttttt~~ttt~~ttttttt~~ta tcgaa~~agaga~~ at~~ttt~~actt  
 tggatagaaa tat~~gaagt~~gt aaggcattat ggaact~~gg~~tt cttatt~~ccc~~ t~~gttt~~gt~~gt~~tt  
 tt~~gg~~tt~~gt~~tt t~~ttttttt~~tt~~ttttttt~~caaa~~acgt~~ta cccattt~~ca~~ caaa~~atgag~~  
 gaaaataaga at~~ttgat~~tt tt~~gttag~~aaa aact~~ttttt~~ttt~~ttttt~~tc accac~~ccca~~  
 gccc~~cattt~~tg~~ccctgccc~~ cacaat~~aca~~ cctacag~~ctt~~ tt~~gg~~tc~~ccct~~ gc~~ctt~~cc~~ca~~  
 cct~~caaa~~gaa~~aa~~ t~~ttt~~caagg~~ct~~ cttac~~ctt~~ta t~~ttt~~tt~~ttt~~tg t~~ccattt~~tc t~~ttcc~~ct~~cc~~  
 tt~~gcattt~~ta aagt~~gg~~gag~~gg~~ t~~ttgt~~ct~~tt~~ tg~~at~~tt~~gt~~at ggc~~aga~~at~~ca~~ ct~~gat~~gg~~ga~~  
 t~~ccag~~tt~~ttt~~tg~~ctgg~~catt taaat~~atgt~~ga aaag~~agt~~gt~~ta~~ tat~~gt~~gaact t~~gac~~act~~cc~~  
 aact~~cct~~gt~~tc~~ at~~ggc~~ac~~gg~~ a~~g~~c~~t~~agg~~gt~~ g~~c~~t~~g~~tg~~g~~ac c~~tt~~cc~~t~~aaa c~~ct~~gt~~c~~act~~c~~  
 aagaggactt cag~~c~~t~~ct~~gt~~ct~~ g~~t~~tt~~gg~~g~~ct~~gg t~~gt~~tg~~gg~~aca gaagg~~at~~gg aaag~~cc~~aa~~at~~  
 taat~~tt~~tag~~tc~~ cag~~at~~t~~ct~~ta g~~ttt~~gg~~gg~~tt t~~tt~~ct~~aaaa~~aaa taaa~~agat~~ta c~~at~~t~~act~~tc  
 tt~~tt~~act~~ttt~~tataa~~agttt~~ttt~~ttt~~cc~~tta~~ g~~t~~tc~~c~~act tag~~agat~~t~~tt~~ ct~~agaa~~at~~tg~~  
 tcact~~tg~~aa~~g~~ ag~~ga~~at~~t~~t~~ttt~~taat~~c~~ t~~gg~~caca~~ac~~ c~~ta~~att~~ac~~ca t~~ttt~~taa~~agc~~  
 g~~t~~t~~taa~~at~~gt~~tg~~taat~~tt~~aa~~ ac~~ctt~~gt~~tt~~tg taact~~gaa~~ag g~~tc~~g~~at~~gt~~ta~~ at~~gg~~at~~tg~~cc  
 g~~ttt~~gt~~ac~~ct gt~~at~~c~~ag~~t~~at~~ tg~~ct~~gt~~gt~~taa aaatt~~ct~~gt~~ta~~ tc~~aga~~ataat aac~~ag~~t~~act~~gt  
 t~~at~~at~~catt~~ g~~at~~t~~ttt~~ttt aat~~ttt~~at~~at~~ c~~ctt~~at~~ttt~~ttt g~~t~~caaaaaaaa aaaaaaaaaaaa  
 aaaaat~~at~~gc gg~~cc~~g~~cg~~cg

<210> 2

<211> 108

<212> PRT

<213> Homo sapiens

<400> 2

Met Arg Ser Leu Cys Cys Ala Pro Leu Leu Leu Leu Leu Leu Pro  
 1 5 10 15  
 Pro Leu Leu Leu Thr Pro Arg Ala Gly Asp Ala Ala Val Ile Thr Gly  
 20 25 30  
 Ala Cys Asp Lys Asp Ser Gln Cys Gly Gly Gly Met Cys Cys Ala Val  
 35 40 45  
 Ser Ile Trp Val Lys Ser Ile Arg Ile Cys Thr Pro Met Gly Lys Leu  
 50 55 60  
 Gly Asp Ser Cys His Pro Leu Thr Arg Lys Val Pro Phe Phe Gly Arg  
 65 70 75 80  
 Arg Met His His Thr Cys Pro Cys Leu Pro Gly Leu Ala Cys Leu Arg  
 85 90 95  
 Thr Ser Phe Asn Arg Phe Ile Cys Leu Ala Gln Lys  
 100 105

<210> 3

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> This degenerate sequence encodes the amino acid  
 sequence of SEQ ID NO:2.

<221> misc\_feature

<222> (1) . . . (324)  
<223> n = A, T, C or G

<400> 3

atgmgwnwsny	tntgytgygc	nccnytnytn	ytnytnytny	tnytccncc	nytnytnytn	60
acnccnmngng	cnngngaygc	ngcngtnath	acnggngcnt	gygayaarga	ywsncartgy	120
ggnggnggna	tgtgytgygc	ngtnwsnath	tgggtnaarw	snathmgnat	htgyacnccn	180
atgggnaary	tnggngayws	ntgycayccn	ytnacnmgna	argtccnnt	ytttyggnmgn	240
mgnatgcayc	ayacntgycc	ntgyytnccn	ggnytngcnt	gyytnmgnac	nwsnttyaay	300
mgnntyath	gytngcnca	raar				324

<210> 4  
<211> 1409

<212> DNA  
<213> *Homo sapiens*

<220>

<221> CDS

<222> (91) . . . (405)

<400> 4

tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg catctaagca  
ggcagtgttt tgcccttacc ccaagtgacc atg aga ggt gcc acg cga gtc tca  
Met Arg Gly Ala Thr Arg Val Ser  
1 5

atc atg ctc ctc cta gta act gtg tct gac tgt gct gtg atc aca ggg  
Ile Met Leu Leu Leu Val Thr Val Ser Asp Cys Ala Val Ile Thr Gly  
10 15 20

```

gcc tgt gag cgg gat gtc cag tgt ggg gca ggc acc tgc tgt gcc atc 210
Ala Cys Glu Arg Asp Val Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile
 25          30          35          40

```

```
ggc gag gag tgc cac ccc ggc agc cac aag gtc ccc ttc ttc agg aaa      306
Gly Glu Glu Cys His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys
60          65          70
```

cgc aag cac cac acc tgt cct tgc ttg ccc aac ctg ctg tgc tcc agg  
Arg Lys His His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg  
75 80 85

ttc ccg gac ggc agg tac cgc tgc tcc atg gac ttg aag aac atc aat 402  
 Phe Pro Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn  
 90 95 100

ttt taqqcqcttq cctqqtctca qqataccacatcctttc ctqagcacacq

Phe  
105

cctggatttt	tatttctgcc	atgaaaccca	gctcccatga	ctctcccagt	ccctacactg	515
actaccctga	tctctcttgt	ctagtagcga	catatgcaca	caggcagaca	taccccccatt	575
catgacatgg	tccccaggt	ggcctgagga	tgtcacagct	tgaggctgtg	gtgtgaaagg	635
tggccagcct	ggttctcttc	cctgctcagg	ctgcccagaga	ggtggtaaat	ggcagaaaagg	695
acattcccccc	tccccctcccc	aggtgacctg	ctctcttcc	tggccctgc	ccctctcccc	755
acatgtatcc	ctcggctctga	attagacatt	cctgggcaca	ggcttctggg	tgcattgctc	815
agagttccag	gtcctggct	gaccctcagg	cccttcacgt	gaggtctgtg	aggaccaatt	875
tgtgggtagt	tcatcttccc	tcgattggtt	aactccttag	tttcagacca	cagactcaag	935

attggctctt	cccagagggc	agcagacagt	caccccaagg	caggtgttagg	gagcccaggg	995
aggccaatca	gcccccctgaa	gactctggtc	ccagtcagcc	tgtggcttgc	ggcctgtgac	1055
ctgtgacctt	ctgcccagaat	tgtcatgcct	ctgaggcccc	ctcttaccac	actttaccag	1115
ttaaccactg	aagcccccaa	ttcccacagc	ttttccattt	aatgcaaat	ggtgtgggtt	1175
caatctaatac	tgatattgac	atattagaag	gcaattaggg	tgtttcctta	aacaactcct	1235
ttccaaaggat	cagccctgag	agcaggttgg	tgacttttag	gagggcagtc	ctctgtccag	1295
atgggggtgg	gagcaaggga	cagggagcag	ggcaggggct	aaaaggggca	ctgattcaga	1355
ccagggaggc	aactacacac	caacctgctg	gctttagaaat	aaaagcacca	actg	1409

<210> 5  
<211> 105  
<212> PRT  
<213> *Homo sapiens*

```

<400> 5
Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Leu Val Thr Val
      1           5           10           15
Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val Gln Cys
      20           25           30
Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg Gly Leu Arg
      35           40           45
Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys His Pro Gly Ser
      50           55           60
His Lys Val Pro Phe Phe Arg Lys Arg Lys His His Thr Cys Pro Cys
      65           70           75           80
Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro Asp Gly Arg Tyr Arg Cys
      85           90           95
Ser Met Asp Leu Lys Asn Ile Asn Phe
      100          105

```

```
<210> 6
<211> 315
<212> DNA
<213> Artificial Sequence
```

<220>  
<223> This degenerate sequence encodes the amino acid sequence of SEQ ID NO:5.

```
<221> misc_feature  
<222> (1)...(315)  
<223> n = A,T,C or G
```

<400> 6  
atgmnggng cnacnmngnt nwsnathatg ytnytnyng tnacngtnws ngaytgygcn 60  
gtnathacng gngcntgyga rmngngaygtn cartgyggng cnggnacntg ytgygcnath 120  
wsnytntggy tnmngnggnyt nmgnatgtgy acnccnytng gnmngngargg ngargartgy 180  
cayccnggnw sncayaargt nccnttytty mgnarmgna arcaycayac ntgyccntgy 240  
ytnccnaaayy tnytntgyws nmgnnttyccn gayggnmngnt aymgntgyws natggayytn 300  
aaraayatha ayty 315

```
<210> 7
<211> 16
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Peptide linker.

<400> 7

```

Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
 1           5           10          15

<210> 8
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Motif.

<221> VARIANT
<222> (8)...(8)
<223> Xaa is Asp or Glu.

<221> VARIANT
<222> (9)...(9)
<223> Xaa is Lys or Arg.

<221> VARIANT
<222> (1)...(10)
<223> Xaa = Any Amino Acid

<400> 8
Ala Val Ile Thr Gly Ala Cys Xaa Xaa Asp
 1           5           10

<210> 9
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Motif.

<221> VARIANT
<222> (4)...(4)
<223> Xaa is Gly or Leu.

<221> VARIANT
<222> (5)...(5)
<223> Xaa is Ser or Thr.

<221> VARIANT
<222> (6)...(6)
<223> Xaa is His or Arg.

<221> VARIANT
<222> (12)...(12)
<223> Xaa is any amino acid.

<221> VARIANT
<222> (13)...(13)
<223> Xaa is Lys or Arg.

<221> VARIANT
<222> (15)...(15)
<223> Xaa is any amino acid.

<400> 9
Cys His Pro Xaa Xaa Xaa Lys Val Pro Phe Phe Xaa Xaa Arg Xaa His
 1           5           10          15

```

```

His Thr Cys Pro Cys Leu Pro
20

<210> 10
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Glu-Glu tag

<400> 10
Glu Tyr Met Pro Met Glu
1 5

<210> 11
<211> 249
<212> DNA
<213> Homo sapiens

<400> 11
atggccgtga tcaccggggc ttgtgacaag gactccaaat gtgggtggagg catgtgctgt 60
gctgtcgtca tctgggtcaa gagcataagg attgcacac ctagggcaa actgggagac 120
agctgccatc cactgactcg taaagttcca tttttgggc ggaggatgca tcacacttgc 180
ccgtgtctgc caggcttggc ctgttacgg acttcattta accgatttat ttgttttagcc 240
caaaaagtaa 249

<210> 12
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer ZC40821

<400> 12
ctagaaataa ttttgtttaa cttaagaag gagatataata tatggccgtg atcaccgggg 60
cttgtgac 68

<210> 13
<211> 67
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer ZC40813

<400> 13
tctgtatcag gctgaaaatc ttatctcatc cgccaaaaca ttactttgg gctaaacaaa 60
taaatcg 67

<210> 14
<211> 249
<212> DNA
<213> Artificial Sequence

<220>
<223> Codon optimized polynucleotide sequence for Zven1

<400> 14
atggctgtta ttaccgggtgc ttgcgacaaa gactctcagt gtgggtggatgtgctgc 60
gctgtttcta tctgggttaa atctatccgt atctgcactc ctagggtaa actgggtgac 120

```

tcttgcacatc cgctgactcg taaagttccg ttcttcggtc gtcgtatgca tcacacctgt 180  
ccgtgcctgc cgggtctggc ttgcctgcgt acctcttca accgttcat ttgcctggct 240  
cagaagtaa 249

<210> 15  
<211> 79  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer ZC45,048

<400> 15  
agtcaatgga tgacaagaat cacccaactt acccatagga gtacaaattc tgatagactt 60  
aacccaaata gaaacagca 79

<210> 16  
<211> 77  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer ZC45049

<400> 16  
ttcttgtcat ccattgacta gaaaggttcc attctttgggt agaaggatgc atcacacttg 60  
tccatgtttg ccagggt 77

<210> 17  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer ZC45050

<400> 17  
ttactttga gccaaacaaa tgaatctgtt gaaagaagtt ctc当地acaag ccaaacctgg 60  
caaacatgga 70

<210> 18  
<211> 68  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer ZC45051

<400> 18  
attactgggt cttgtgataa ggattctcaa tgtgggggt gtatgtgttgc tgctgtttct 60  
atttgggt 68

<210> 19  
<211> 65  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer ZC45052

<400> 19  
ttatcacaag caccagtaat aacagcagca tcaccggctc ttggagtcaa caacaatgg 60

ggcaa 65

<210> 20

<211> 59

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer ZC45053

<400> 20

atgagatctt tgtgttgtgc tccattgttg ttgttgtgt tggtgccacc attgttgtt 59

<210> 21

<211> 1182

<212> DNA

<213> Homo sapiens

<400> 21

atggagacca ccatggggtt catggatgac aatgccacca acacttccac cagcttcctt 60  
tctgtgctca accctcatgg agcccatgcc acttccttcc cattcaactt cagctacagc 120  
gactatgata tgccttggg tgaagatgag gatgtgacca attccaggac gttcttgct 180  
gccaaaggattt tcattgggat ggccctggg ggcattcatgc tggctgcgg cattggaaac 240  
ttcatcttta tcgctgcctt ggtccgctac aagaaaactgc gcaacctcac caacctgctc 300  
atcgccaaacc tggccatctc tgacttcctg gtggccattt tctgctgccc ctttgagatg 360  
gactactatg tgggtgcgcca gctctcctgg gagcacggcc acgtcctgtg caccctgtc 420  
aactacactgc gcactgtctc tctctatgtc tccaccaatg ccctgctggc catcgccatt 480  
gacaggttac tggctattgtt ccatccgctg agaccacgga tgaagtgcac aacaggccact 540  
ggcctgattt ccttgggtgt gacgggtgtcc atcctgatcg ccatcccttc cgcctacttc 600  
accaccgaga cggtcctcgat cattgtcaag agccaggaaa agatcttctg cggccagatc 660  
tggcctgtgg accagcagct ctactacaag tcctacttcc tccttatctt tggcatagaa 720  
ttcgtgggcc cctgtggtcac catgaccctg tgctatgcca gnatctcccg ggagctctgg 780  
ttcaaggccgg tccctggatt ccagacagag cagatccgca agaggctgca ctgcccgcagg 840  
aagacgttcc tgggtgtcat gtgcattctc accgcctacg tgctatgtc ggcgccttc 900  
tacggcttca ccatcgtgca cgacttctt cccaccgtgt ttgtgaagga gaagcactac 960  
ctcaactgtt tetacatcgat cgagtgcatc gccatgagca acagcatgtat caacactctg 1020  
tgctcgtgtt cctgtcaagaa cgacaccgtc aagtacttca aaaagatcat gttgtccac 1080  
tggaaaggctt cttaaaatgg cggttaagtcc agtgcagacc tggacctcaa gacaattggg 1140  
atgcctgcca cccaaaggatggt ggactgcatac agactaaaaat aa 1182

<210> 22

<211> 1155

<212> DNA

<213> Homo sapiens

<400> 22

atggcagccc agaatggaaa caccagttt acaccccaact ttaatccacc ccaagaccat 60  
gcctccccc ttcctttaa cttcagttat ggtgattatg acctccctat ggatgaggat 120  
gaggacatga ccaagacccc gaccttcttc gcagccaaga tcgtcattgg cattgcactg 180  
gcaggcatca tgctggctg cggcatcggt aactttgtct ttatcgctgc cctcacccgc 240  
tataagaagt tgcgcaacct caccatctg ctcattgcca acctggccat ctccgacttc 300  
ctgggtggca tcatctgtc ccccttcgag atggactact acgtggtaacg gcagctctcc 360  
tgggagcatg gccacgtgt ctgtgcctcc gtcaactacc tgccgaccgt ctcctctac 420  
gtctccacca atgccttgcg gcccattgcc attgacagat atctcgccat cgttaccccc 480  
ttgaaaccac ggtatgat tcaaaacggcc tccttcgttgcg tggatgggtg 540  
tccattctca ttgcctatccc atcggtttac tttgcaacag aaacgggtctt ctttattgtc 600  
aagagccagg agaagatctt ctgtggccag atctggctg tgatcagca gctctactac 660  
aagtccact tcctcttcat ctttgggtgc gagttcggtt gcccgtgtt caccatgacc 720  
ctgtgtatg ccaggatctc cggggagctc tggatcggtt cgtccctgg gttccagacg 780  
gagcagattc gcaaggcgct ggcgtgcacc aggaagacgg tccctgggtt catgtgcatt 840  
ctcacggctt atgtgtgtt ctgggcaccc ttctacgggtt tcaccatcgat tcgtgacttc 900  
ttccccactg tgttcggtt gggaaaqac tacctcaactg cttctacgt ggtcgagtg 960

atcgccatga gcaacagcat gatcaacacc gtgtgcttcg tgacggtaa gaacaacacc 1020  
 atgaagtact tcaagaagat gatgctgctg cactggcgtc cctcccagcg ggggagcaag 1080  
 tcacgtgctg accttgaccc cagaaccaac ggggtgccc ccacagaaga ggtggactgt 1140  
 atcaggctga agtga 1155

<210> 23  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Oligonucleotide primer ZC29463

<400> 23  
 ggaattcatg aggagcctgt gctgcgcc 28

<210> 24  
 <211> 31  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Oligonucleotide primer ZC29462

<400> 24  
 gctctagacc cttttggct aaacaaataa a 31

<210> 25  
 <211> 348  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Expression sequence

<400> 25  
 atgaggagcc tggctgcgc cccactcctg ctccctttgc tgctgccccc gctgctgctc 60  
 acgccccgcg ctggggacgc cgccgtgatc accggggctt gtgacaagga ctcccaatgt 120  
 ggtggaggca tggctgtgc tggcgtatc tgggtcaaga gcataaggat ttgcacaccc 180  
 atgggcaaac tgggagacag ctgcccattca ctgactcgta aagttccatt ttttggcgg 240  
 agatgcattc acacttgccc gtgtctgcca ggcttggcct gtttacggac ttcatttaac 300  
 cgatttattt gtttagccca aaagggtcta gaatacatgc cgatggac 348

<210> 26  
 <211> 116  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Expression sequence with Gly linker and  
 Glu-Glu-tag

<400> 26  
 Met Arg Ser Leu Cys Cys Ala Pro Leu Leu Leu Leu Leu Leu Pro  
 1 5 10 15  
 Pro Leu Leu Leu Thr Pro Arg Ala Gly Asp Ala Ala Val Ile Thr Gly  
 20 25 30  
 Ala Cys Asp Lys Asp Ser Gln Cys Gly Gly Gly Met Cys Cys Ala Val  
 35 40 45

Ser Ile Trp Val Lys Ser Ile Arg Ile Cys Thr Pro Met Gly Lys Leu  
 50 55 60  
 Gly Asp Ser Cys His Pro Leu Thr Arg Lys Val Pro Phe Phe Gly Arg  
 65 70 75 80  
 Arg Met His His Thr Cys Pro Cys Leu Pro Gly Leu Ala Cys Leu Arg  
 85 90 95  
 Thr Ser Phe Asn Arg Phe Ile Cys Leu Ala Gln Lys Gly Leu Glu Tyr  
 100 105 110  
 Met Pro Met Asp  
 115

<210> 27  
 <211> 393  
 <212> PRT  
 <213> Homo sapiens

<400> 27  
 Met Glu Thr Thr Met Gly Phe Met Asp Asp Asn Ala Thr Asn Thr Ser  
 1 5 10 15  
 Thr Ser Phe Leu Ser Val Leu Asn Pro His Gly Ala His Ala Thr Ser  
 20 25 30  
 Phe Pro Phe Asn Phe Ser Tyr Ser Asp Tyr Asp Met Pro Leu Asp Glu  
 35 40 45  
 Asp Glu Asp Val Thr Asn Ser Arg Thr Phe Phe Ala Ala Lys Ile Val  
 50 55 60  
 Ile Gly Met Ala Leu Val Gly Ile Met Leu Val Cys Gly Ile Gly Asn  
 65 70 75 80  
 Phe Ile Phe Ile Ala Ala Leu Val Arg Tyr Lys Lys Leu Arg Asn Leu  
 85 90 95  
 Thr Asn Leu Leu Ile Ala Asn Leu Ala Ile Ser Asp Phe Leu Val Ala  
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 Ile Val Cys Cys Pro Phe Glu Met Asp Tyr Tyr Val Val Arg Gln Leu  
 115 120 125  
 Ser Trp Glu His Gly His Val Leu Cys Thr Ser Val Asn Tyr Leu Arg  
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 Thr Val Ser Leu Tyr Val Ser Thr Asn Ala Leu Leu Ala Ile Ala Ile  
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 Asp Arg Tyr Leu Ala Ile Val His Pro Leu Arg Pro Arg Met Lys Cys  
 165 170 175  
 Gln Thr Ala Thr Gly Leu Ile Ala Leu Val Trp Thr Val Ser Ile Leu  
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 Ile Ala Ile Pro Ser Ala Tyr Phe Thr Thr Glu Thr Val Leu Val Ile  
 195 200 205  
 Val Lys Ser Gln Glu Lys Ile Phe Cys Gly Gln Ile Trp Pro Val Asp  
 210 215 220  
 Gln Gln Leu Tyr Tyr Lys Ser Tyr Phe Leu Phe Ile Phe Gly Ile Glu  
 225 230 235 240  
 Phe Val Gly Pro Val Val Thr Met Thr Leu Cys Tyr Ala Arg Ile Ser  
 245 250 255  
 Arg Glu Leu Trp Phe Lys Ala Val Pro Gly Phe Gln Thr Glu Gln Ile  
 260 265 270  
 Arg Lys Arg Leu Arg Cys Arg Arg Lys Thr Val Leu Val Leu Met Cys  
 275 280 285  
 Ile Leu Thr Ala Tyr Val Leu Cys Trp Ala Pro Phe Tyr Gly Phe Thr  
 290 295 300  
 Ile Val Arg Asp Phe Phe Pro Thr Val Phe Val Lys Glu Lys His Tyr  
 305 310 315 320  
 Leu Thr Ala Phe Tyr Ile Val Glu Cys Ile Ala Met Ser Asn Ser Met  
 325 330 335  
 Ile Asn Thr Leu Cys Phe Val Thr Val Lys Asn Asp Thr Val Lys Tyr  
 340 345 350

Phe Lys Lys Ile Met Leu Leu His Trp Lys Ala Ser Tyr Asn Gly Gly  
 355 360 365  
 Lys Ser Ser Ala Asp Leu Asp Leu Lys Thr Ile Gly Met Pro Ala Thr  
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 Glu Glu Val Asp Cys Ile Arg Leu Lys  
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<210> 28  
 <211> 384  
 <212> PRT  
 <213> Homo sapiens

<400> 28  
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 Tyr Asp Leu Pro Met Asp Glu Asp Glu Asp Met Thr Lys Thr Arg Thr  
 35 40 45  
 Phe Phe Ala Ala Lys Ile Val Ile Gly Ile Ala Leu Ala Gly Ile Met  
 50 55 60  
 Leu Val Cys Gly Ile Gly Asn Phe Val Phe Ile Ala Ala Leu Thr Arg  
 65 70 75 80  
 Tyr Lys Lys Leu Arg Asn Leu Thr Asn Leu Leu Ile Ala Asn Leu Ala  
 85 90 95  
 Ile Ser Asp Phe Leu Val Ala Ile Ile Cys Cys Pro Phe Glu Met Asp  
 100 105 110  
 Tyr Tyr Val Val Arg Gln Leu Ser Trp Glu His Gly His Val Leu Cys  
 115 120 125  
 Ala Ser Val Asn Tyr Leu Arg Thr Val Ser Leu Tyr Val Ser Thr Asn  
 130 135 140  
 Ala Leu Leu Ala Ile Ala Ile Asp Arg Tyr Leu Ala Ile Val His Pro  
 145 150 155 160  
 Leu Lys Pro Arg Met Asn Tyr Gln Thr Ala Ser Phe Leu Ile Ala Leu  
 165 170 175  
 Val Trp Met Val Ser Ile Leu Ile Ala Ile Pro Ser Ala Tyr Phe Ala  
 180 185 190  
 Thr Glu Thr Val Leu Phe Ile Val Lys Ser Gln Glu Lys Ile Phe Cys  
 195 200 205  
 Gly Gln Ile Trp Pro Val Asp Gln Gln Leu Tyr Tyr Lys Ser Tyr Phe  
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 Leu Phe Ile Phe Gly Val Glu Phe Val Gly Pro Val Val Thr Met Thr  
 225 230 235 240  
 Leu Cys Tyr Ala Arg Ile Ser Arg Glu Leu Trp Phe Lys Ala Val Pro  
 245 250 255  
 Gly Phe Gln Thr Glu Gln Ile Arg Lys Arg Leu Arg Cys Arg Arg Lys  
 260 265 270  
 Thr Val Leu Val Leu Met Cys Ile Leu Thr Ala Tyr Val Leu Cys Trp  
 275 280 285  
 Ala Pro Phe Tyr Gly Phe Thr Ile Val Arg Asp Phe Phe Pro Thr Val  
 290 295 300  
 Phe Val Lys Glu Lys His Tyr Leu Thr Ala Phe Tyr Val Val Glu Cys  
 305 310 315 320  
 Ile Ala Met Ser Asn Ser Met Ile Asn Thr Val Cys Phe Val Thr Val  
 325 330 335  
 Lys Asn Asn Thr Met Lys Tyr Phe Lys Lys Met Met Leu Leu His Trp  
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 Arg Pro Ser Gln Arg Gly Ser Lys Ser Ser Ala Asp Leu Asp Leu Arg  
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 Thr Asn Gly Val Pro Thr Thr Glu Glu Val Asp Cys Ile Arg Leu Lys  
 370 375 380

<210> 29  
<211> 129  
<212> PRT  
<213> Homo sapiens

<400> 29  
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Ala Cys Asp Lys Asp Ser Gln Cys Gly Gly Met Cys Cys Ala Val  
35 40 45  
Ser Ile Trp Val Lys Ser Ile Arg Ile Cys Thr Pro Met Gly Lys Leu  
50 55 60  
Gly Asp Ser Cys His Pro Leu Thr Arg Lys Asn Asn Phe Gly Asn Gly  
65 70 75 80  
Arg Gln Glu Arg Arg Lys Arg Lys Arg Ser Lys Arg Lys Lys Glu Val  
85 90 95  
Pro Phe Phe Gly Arg Arg Met His His Thr Cys Pro Cys Leu Pro Gly  
100 105 110  
Leu Ala Cys Leu Arg Thr Ser Phe Asn Arg Phe Ile Cys Leu Ala Gln  
115 120 125  
Lys